

21-12-2000

7

## CLAIMS

1. Device for measuring fibre properties in a flowing suspension, which device includes a measuring cell (10) in which there is a measuring field (48) defined between two limiting surfaces and a means (56) of adjusting the width of the measuring field (48), the limiting surfaces having two opposing, transparent sections (60, 62) that allow illumination through the flowing suspension passing through and measurement by optical means, and the measuring cell (10) having an inlet opening (38) intended for the whole of the suspension flow and an outlet opening (40) intended for the whole of the suspension flow, characterised in that the inlet opening (38) extends through one of the limiting surfaces.

2. Device according to claim 1, characterised in that an inlet tube (42) for directing and stabilising the suspension flow is connected to the inlet opening (38) and has a length that is greater than its width.

3. Device according to any of claims 1 and 2, characterised in that the periphery of the other limiting surface extends to reach an outer wall (36) of the measuring cell (10) and that a intermediate space occurs between the periphery of the said one limiting surface and the outer wall (36) to form a peripheral field (54).

4. Device according to any of claims 1-3, characterised in that the distance between the limiting surfaces is adjustable within the range of 0.5-5 mm.

5. Device according to any of claims 1-4, characterised in that the inlet opening (38) is positioned centrally with regard to the said one limiting surface to obtain a radial suspension flow in the measuring field (48) having circular limiting surfaces, with a pressure that diminishes in a radial direction.

6. Device according to any of claims 1-9, characterised in that the other limiting surface is rotatable by the aid of a motor (72).

7. Device according to any of claims 2-6, characterised in that the area of the inlet tube (42) across the direction of flow is greater than the area of the measuring field (48) across the direction of flow immediately after the inlet opening (38).

## CLAIMS

Sub  
C1  
5 1. Device for measuring fibre properties in a flowing suspension characterised in that it includes a measuring cell (10) in which there is a measuring field (48) defined between two limiting surfaces and a means (56) of adjusting the width of the measuring field (48), that the limiting surfaces have two opposing, transparent sections (60, 62) that allow illumination through the flowing suspension passing through and measurement by optical means, plus that the measuring cell (10) has an inlet opening (38) intended for the whole of the suspension flow and an outlet opening (40) intended for the whole of the suspension flow.

15 2. Device according to claim 1 characterised in that the inlet opening (38) extends through one of the limiting surfaces and that an inlet tube (42) for directing and stabilising the suspension flow is connected to the inlet opening (38) and has a length that is greater than its width.

Sub  
B1  
20 3. Device according to claim 1 or 2 characterised in that the limiting surfaces of the measuring field (48) are flat and parallel.

25 4. Device according to any of claims 1-3 characterised in that the limiting surfaces of the measuring field (48) are circular.

5. Device according to any of claims 1-4 characterised in that the periphery of the second limiting surface extends to reach an outer wall (36) of the measuring cell (10) and that an intermediate space occurs between the periphery of the said one limiting surface and the outer wall (36) to form a peripheral field (70).

30 6. Device according to any of claims 1-5 characterised in that the distance between the limiting surfaces is adjustable in the range 0.5-5 mm.

7. Device according to any of claims 1-6 characterised in that the said second limiting surface is part of a moveable piston cylinder (46) and that the said other limiting surface with the inlet opening (38) is stationary.
- 5 8. Device according to any of claims 1-7 characterised in that the said outer wall (36) of the measuring cell (10) is provided with stop elements (66, 68) to limit the movement of the piston cylinder in an upper and a lower position.
9. Device according to any of claims 1-8 characterised in that the inlet opening
- 10 (38) is positioned centrally with regard to the said one limiting surface to obtain a radial suspension flow in the measuring field (48) with a pressure that diminishes in a radial direction.
10. Device according to any of claims 1-9 characterised in that the moveable
- 15 limiting surface can rotate with the aid of a motor (72).
11. Device according to any of claims 2-10 characterised in that the area of the inlet tube (42) across the direction of flow is greater than the area of the measuring field (48) across the direction of flow immediately after the inlet opening (38).